SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for the

MISSOURI and ARKANSAS

DRAINAGE BASINS

May 1, 1942

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Issued by the
United States Department of Agriculture
Soil Conservation Service
Division of Irrigation
In Cooperation with
The Colorado Agricultural Experiment Station
Colorado State College
Fort Collins, Colorado

May 10, 1942

SNOW SURVEYS AND IRRIGATION WATER FORECASTS FOR MISSOURI AND ARKANSAS RIVERS

May 1, 1942

The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by the Division of Irrigation, Soil Conservation Service, of the U. S. Department of Agriculture, in cooperation with State departments, other Federal bureaus and local organizations. The snow measurements are made principally by field personnel of the following organizations: Forest Service, National Park Service, Bureau of Reclamation, U. S. Geological Survey, War Department and State Experiment Stations. This work is otherwise conducted cooperatively with the State Engineers of Colorado and Wyoming, and various municipalities, irrigation associations, power companies and others. Precipitation records are supplied by the U. S. Weather Bureau.

PRECIPITATION DATA

(Based on incomplete returns)

WATERSHED	STATE	Precipitation October 1 to April 30	Departure from Normal	Precipitation April	Departure from Normal
		Inches	Inches	Inches	Inches
Missouri	East. Mont.	4.93	-0.04	1.35	+0.25
Missouri	Cent. Mont.	5.14	-0.51	0.56	-0.63
Missouri	North. Wyo.	9.13	-1.42	1.58	-0.45
North Platte	Wyoming	8.25	+1.23	2.32	+0.90
South Platte	Colorado	14.05	+6.31	6.47	+4.21
Arkansas	Colorado	12.73	+5.86	5.92	+4.08

Precipitation during April was above normal except in central Montana and northern Wyoming. The greatest excess of precipitation occurred over the watersheds of the South Platte and Arkansas Rivers. The accumulated precipitation from October 1 to April 30 is now considerably above normal except in central and eastern Montana, and northern Wyoming. Conditions in Colorado and most of Wyoming are much better than they were a month ago.

SUMMARY OF MAY 1 SNOW SURVEYS AND COMPARISON OF DATA

WITH THAT OF PREVIOUS YEARS BY WATERSHEDS

WATERSHEDS	Snow Depth			Water Content			Number courses in average	Snow Density			1942 Water Content in percent of	
	Seven Year Avg.*	1941	1942	Seven Year Avg.*	1941	1942		Seven year Avg.*	1941	1942	Seven year Avg.*	1941
MISSOURI RIVER	In.	In.	In.	In.	In.	In.		Percent	Percent	Percent		
Jefferson River	18.8	21.2	25.3	6.0	5.7	8.0	2	32	27	32	133	140
Madison River	35.3	25.4	26.1	15.1	10.3	11.0	5	43	41	42	73	107
Gallatin River	27.6	22.0	29.8	10.0	7.2	10.0	3	36	33	34	100	139
Missouri River**	12.1	10.8	10.8	4.0	3.5	4.0	4	33	32	37	100	114
Marias River	12.6	T	2.7	5.6	T	1.0	2	44	--	37	18	--
Yellowstone River	16.0	22.2	5.1	5.7	7.2	1.4	4	36	32	27	25	19
Shoshone River	34.9	37.8	24.7	11.8	10.1	7.4	3	34	27	30	63	73
Bighorn River	19.9	30.4	10.6	6.7	9.6	3.0	11	34	32	28	45	31
Tongue River	16.6	30.4	8.7	6.2	10.0	2.3	2	37	33	26	37	23
Powder River	14.2	26.2	4.6	4.0	8.6	0.6	2	28	33	13	15	7
North Platte River	48.1	51.6	49.7	19.1	19.2	17.0	10	40	37	34	89	89
Sweetwater River	27.8	48.8	13.7	9.0	15.3	3.6	2	32	21	26	40	24
Laramie River	23.7	29.2	30.5	8.8	9.9	8.1	5	37	34	27	92	82
South Platte River***	14.1	22.0	21.6	4.3	6.4	6.5	3	30	29	30	151	102
Crow Creek	5.8	8.6	21.0	1.5	2.6	4.4	1	26	30	31	293	169
Poudre River	32.9	31.9	39.8	11.9	11.2	12.2	5	26	35	31	102	109
Big Thompson River	58.6	54.6	65.7	18.7	18.2	18.0	2	32	33	27	96	99
St. Vrain River	36.3	37.2	53.0	12.6	12.4	14.5	1	35	33	27	115	117
Boulder Creek	30.4	28.8	47.0	10.6	9.6	14.9	2	35	33	32	141	155
Clear Creek	39.6	42.5	50.0	13.4	12.7	16.1	1	34	30	32	120	127
ARKANSAS RIVER	26.6	41.7	38.2	9.2	14.7	12.2	10	35	35	32	133	83

*Some for shorter periods. **Headwaters of Missouri River. ***Above Denver, Colo.

WATER SUPPLY OUTLOOK

MONTANA. The water supply outlook for Montana has continued favorable over the past month. Recent surveys show the water content of the snow on the Jefferson River drainage to be 40 percent over that of a year ago and a third more than the past seven-year average. Conditions on the Madison River watershed remained practically the same as on April 1, which is a 10 percent improvement over that of last year at this time. For the Gallatin and Upper Missouri, the present water storage in the snow pack is approximately one-fourth more than it was a year ago and equal to the average over the past seven years. On the Marias River watershed, the present outlook is not favorable for a normal runoff from the snow cover. Snow cover at the high elevations is reported to be normal generally except Marias Pass, where it is found to be light. Stream flow in some sections has already reached high stage during the past month, but recession followed due to sudden drop in temperature. The seasonal runoff in the principal streams heading in the mountain areas is expected to be normal. Soil moisture generally is good, and indications promise better-than-normal reservoir storage this season.

WYOMING. Weather conditions throughout northern Wyoming during April were much below normal. The May 1 snow surveys indicate a much less favorable outlook than was in view on April 1. For the Yellowstone the present water content of the snow cover is only 20 percent of that a year ago and but 25 percent of the past seven-year average. The outlook for the Powder River is less promising. The snow cover on the Shoshone, Big Horn, and Tongue river watersheds is much less than last year and only three-eighths to five-eighths of the seven-year average. For all these northern Wyoming streams and tributaries, the coming runoff is expected to be much below normal. The flow in the Big Horn will probably hold up better than for the other streams. Soil moisture over the north part of the state, particularly the Shoshone and Big Horn valleys, is deficient. For the eastern and south central portions of the state, the April precipitation was about 4 inches and soil moisture conditions are now good to excellent. The reservoir storage in northern Wyoming is much above normal, and because of this assured water supply the irrigation needs in the agricultural areas will be amply provided.

For the North Platte, the situation is much better. The recent May 1 surveys show the water content of the snow to be only 10 percent less than it was a year ago and slightly more than April 1. The seasonal runoff, now starting, will be normal or better and this, together with a large percentage of stored water in the reservoirs there, is expected to provide an ample supply for all irrigation needs. The soil moisture in both mountain and valley areas is good to excellent. The situation on the Laramie is now much improved over that of a month ago. The heavy storm over the headwaters of this stream, since the snow surveys were made, added very greatly to the water content of the snow cover. High water in the Laramie River is expected during the latter part of May and early June, with normal stage in midsummer. This runoff, with present storage in reservoirs, will provide adequately for the irrigation needs of agricultural areas served by this stream. Soil moisture is good to excellent. The outlook for the Sweetwater has become less favorable during the month of April. The runoff from this drainage will be considerably below normal this season, as indicated by

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COLORADO. April storms over both the South Platte and Arkansas drainage areas further improved the water supply outlook for the coming season as shown by the recent snow surveys. On the headwaters of the South Platte, above Denver, the water content of the snow is now equal to that of last year at this time and one-and-a-half times the past seven-year average. During the month this stream has been at near flood stage at Denver. The conditions on the headwaters of the Poudre have been materially improved. Immediately after the snow surveys were made, late in April, heavy storms occurred over the headwaters of this stream, which added two or more feet to the depths here reported. The effects of this storm are now appearing as increased flow in the river at Fort Collins. Much of this water will flow down the valley unused. The situation on the Big Thompson has also improved during the past month, with the low snow now melting rapidly, causing the stream to approach near flood stage. The reservoirs in the Loveland area are now filling, many at capacity, with surplus water passing on to the Platte. The runoff from the Boulder and St. Vrain watersheds has been increasing over the past several days, and it is to be expected that extreme high water will occur in both these streams in the near future. Reservoirs are now filling rapidly, with several filled to capacity, and a large excess flow is moving into the lower valley unused. On the Clear Creek watershed, the recent snow surveys show a substantial gain in the water content of the snow pack over that of April 1 and is a fifth more than the past seven-year average. Excess flow in this stream at present. At Julesburg the South Platte river has been at flood stage for several days and already has reached a flow of 15,000 second-feet.

For the Arkansas the water supply outlook has also improved over the past month. On the headwaters the water content of the snow is a third more than the past seven-year average, a condition favorable for above-normal runoff. Heavy floods occurred in the lower valley during April, arising mainly from the Purgatoire drainage, where considerable damage resulted to the town of Trinidad. Flood water from the Fountain and upper Arkansas added to the crest of the flood. More than 50,000 second-feet is reported to have crossed the state line into Kansas. The reservoirs throughout the Arkansas Valley are now at record filling. All agricultural areas in the South Platte and Arkansas valleys and tributaries will have ample irrigation supplies this season. The present crop outlook over these areas is exceptionally good.

GROUNDWATER. Along the South Platte valley and tributary areas, where irrigation pumping is practiced, there is noted a general rise of the groundwater level. In the Prospect Valley district, the water table has lowered over the past year. For the Arkansas Valley, from Pueblo to Rocky Ford, there has been a general rise in the water table of about three feet over the past year.

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MISSOURI AND ARKANSAS RIVER WATERSHEDS
Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1942, at Fort Collins, Colorado

No.	Main Drainage and Snow Course	Local Drainage	Location			Elev.	National Forest	May 1 Snow Cover Measurements					
			State	Locality	Descrip-tion			Av. Snow Depth			Av. Water Content		
								Av.@	1941	1942	Av.@	1941	1942
								In.	In.	In.	In.	In.	In.
	JEFFERSON RIVER												
6	Camp Creek*	Red Rock Cr.	Idaho	6miN.Spencer	21-13N-36E	6800	Targhee	--	--	--	--	--	--
7	Moose Creek*	N.Fk.BigHole	"	3mi.S.Gibbons P.	27-27N-21E	6200	Salmon	8.6	--	15.8	3.3	--	5.7
7	East Fork R.S.*	Rock Creek	Mont.	13mi.NE.Sula	16-2N-17W	5400	Bitterroot	--	--	--	--	--	--
10	Gibbons Pass	N.Fk.BigHole	"	Gibbons Pass	4-2S-19W	7100	"	--	26.5	--	--	11.4	--
30	Pipestone Pass	Pipestone Cr.	"	Pipestone Pass	11-1N-7W	7200	DeerLodge	5.0	7.4	7.4	1.5	2.0	2.0
	Elkhorn Hot Spgs	Wise River	"	8mi.N.Polaris	15-4S-12W	8450	BeaverHead	--	9.6	--	--	2.4	--
31	Storm Lake	Seymour Cr.	"	15mi.W.Anaconda	19-4N-13W	8100	DeerLodge	32.5	34.9	43.2	10.4	9.4	14.1
					Average for Drainage			18.8	21.2	25.3	6.0	5.7	8.0
	MADISON RIVER												
2	Aster Creek*	Firehole R.	Wyo.	Lewis Lake	44.3N110.6W	7700	Yel.Nat.P.	58.4	48.8	48.2	24.7	18.6	19.1
8	Lewis L. Divide*	" "	"	3mi.S.Lewis L.	44.2N110.7W	7900	" " "	86.0	64.2	63.8	38.0	27.6	28.5
11	Norris Basin	Gibbon River	"	Norris Basin	44.3N110.7W	7500	" " "	--	--	T	--	--	T
3	Big Springs*	South Fork	Idaho	Big Springs	34-14N-44E	6500	Targhee	--	--	--	--	--	--
16	West Yellowstone	South Fork	Mont.	W.Yellowstone	34-13S-5E	6700	Gallatin	6.6	1.6	1.6	2.1	0.6	0.6
	Twenty-one Mile	Greyling Cr.	"	8mi.S.Gallatin	1-11S-5E	7150	Yel.Nat.P.	19.0	12.3	16.4	8.0	4.6	6.4
	Hebgen Dam	Cabin Creek	"	Hebgen Dam	22-11S-3E	6550	Gallatin	6.5	0.0	0.6	2.7	0.0	0.2
	Valley View	Denny Cr.	Idaho	5mi.E.Henry's L.	7-15N-44E	6500	Targhee	--	--	--	--	--	--
					Average for Drainage			35.3	25.4	26.1	15.1	10.3	11.0
	GALLATIN RIVER												
	Devil's Slide	Hyalite Cr.	Mont.	20mi.S.Bozeman	14-5S-6E	8100	Gallatin	54.1	46.1	62.2	19.1	14.8	20.4
	Hood Meadow Extn.	" "	"	14mi." "	22-4S-6E	6600	"	9.6	7.6	10.7	2.9	2.2	3.1
	Mystic Lake No.1	Bozeman Cr.	"	12mi.SE. "	31-3S-7E	6600	"	--	--	--	--	--	--
	Mystic Lake No.2	" "	"	" " "	31-3S-7E	6600	"	--	--	--	--	--	--
	Twenty-One Mile	Gallatin R.	"	8mi.S.Gallatin	1-11S-5E	7150	Yel.Nat.P.	19.0	12.3	16.4	8.0	4.6	6.4
	Ross Peak	Ross Cr.	"	12mi.N.Bozeman	10-1N-6E	7000	Gallatin	--	--	--	--	--	--
	New World Trail	Gallatin River	"	8mi.SE. "	13-3S-6E	7000	"	--	--	--	--	--	--
					Average for Drainage			27.6	22.0	29.8	10.0	7.2	10.0

*On adjacent drainage

@ Average for period of record

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								In.	In.	In.	In.	In.	In.
	MISSOURI RIVER (Headwaters)												
6	Chessman Res.	Tenmile	Mont.	11mi.SW.Helena	2-8N-5W	6200	Helena	2.7	1.1	1.0	0.8	0.4	0.3
11	Goat Mountain	South Fork	"	26mi.W.Gilman	47.5N112.9W	7000	Lewis&Clark	—	0.4	—	—	0.2	—
36	Stemple Pass	Canyon Creek	"	Stemple Pass	16-13N-7W	6900	Helena	—	5.8	—	—	1.6	—
41	Tenmile Cr.Lower	Tenmile	"	17mi.SW.Helena	13-8N-6W	6250	"	3.6	2.6	2.6	1.0	0.9	0.8
42	Tenmile " Middle	"	"	" " "	13-8N-6W	6800	"	16.5	14.8	16.2	5.4	4.9	5.5
43	Tenmile Cr.Upper	"	"	" " "	19-8N-5W	8000	"	25.7	24.8	23.6	9.0	7.8	9.4
	Grasshopper	Grasshopper Cr.	"	6mi.S.W.S.Spgs.	19-9N-8E	7000	Lewis&Clark	—	—	—	—	—	—
	King's Hill	Belt Creek	"	21mi.N.W.S.Spgs.	35-13N-7E	7950	" "	—	27.4	—	—	7.0	—
	Orville Harris	Mussellshell R	"	12mi.E.W.S.Spgs.	31-10N-9E	6500	" "	—	—	—	—	—	—
	Half Moon	Judith River	"	19mi.S.Lewiston	22-12N-18E	6000	" "	—	—	—	—	—	—
					Average for Drainage			12.1	10.8	10.8	4.0	3.5	4.0
	MARIAS RIVER												
7	Desert Mountain*	Cutbank Cr.	Mont.	4mi.S.Belton	24-31N-19W	5600	FlatHead	14.8	0.0	4.2	6.2	0.0	1.4
20	Marias Pass	Two Medicine	"	Summit	48.3N113.4W	5250	Glacier NP	10.4	T	1.2	5.0	T	0.5
					Average for Drainage			12.6	T	2.7	5.6	T	1.0
	YELLOWSTONE RIVER												
14	Dome Lake	Goose Creek	Wyo.	Dome Lake	11-53N-87W	8800	Big Horn	25.7	39.8	10.7	9.7	12.6	2.8
40	Lupine Creek	Lupine Creek	"	11mi.SE.Gardiner	44.9N110.6W	7300	Yel.Nat.P.	7.3	6.5	T	2.6	2.0	T
41	Blacktail DeerCr.	Blk.Tail Deer	"	11mi. " "	44.9N110.6W	7500	" " "	13.4	14.9	T	4.8	5.1	T
70	Lodge Pole	Lodge Pole Cr.	"	34mi.NW.Cody	32-56N-106W	8200	Shoshone	17.8	27.5	9.9	5.7	9.3	2.7
3	Canyon	Tower Creek	"	8mi.N.Canyon Jct	44.7N110.5W	7750	Yel.Nat.P.		—	12.4		—	3.5
	Cook City	Soda Bottle Cr.	Mont.	Cook City	25-9S-14E	7400	Absaroka	8.0	—	T	2.8	—	T
7	Lake Camp	Yellowstone	Wyo.	3mi.NE.FishingBr.	44.6N110.4W	7850	Yel.Nat.P.	—	—	13.3	—	—	4.0
					Average for Drainage			16.0	22.2	5.1	5.7	7.2	1.4

*Adjacent Drainage
@ Average for period of record

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	SHOSHONE RIVER							In.	In.	In.	In.	In.	In.
32	Sylvan Pass	Middle Cr.	Wyo.	Sylvan Pass	12-52N-110W	7100	Yel.Nat.P.	17.3	8.3	4.5	6.1	2.8	2.0
33	Up.Hardpan Basin	Hardpan Cr.	"	27mi.SW.Cody	25-51N-106W	9500	Shoshone	36.3	47.4	29.9	9.2	7.8	8.1
50	Brooks Lake #3*	Shoshone R.	"	Brooks Lake	23-44N-110W	9200	Washakie	51.2	57.6	39.6	20.0	19.6	12.0
					Average for Drainage			34.9	37.8	24.7	11.8	10.1	7.4
	BIGHORN RIVER												
13	Tensleep R.S.	Tensleep Cr.	Wyo.	15mi.NE.Tensleep	30-49N-86W	8300	Bighorn	11.3	13.5	5.9	4.3	6.1	1.9
16	Ranger Creek	Ranger Creek	"	14mi.E.Shell	32-53N-88W	8800	"	19.2	18.8	11.1	6.2	5.6	3.9
14	Dome Lake*	Shell Cr.	"	Dome Lake	11-53N-87W	8800	Bighorn	25.7	39.8	10.7	9.7	12.6	2.8
45	Sawmill Glade	Popo Agie R.	"	13mi.SW.Lander	3-31N-101W	8500	Washakie	13.4	34.5	3.0	4.2	10.9	E0.3
46	Blue Ridge	" " "	"	15mi. " "	23-31N-101W	9500	"	26.6	47.3	16.9	8.2	13.8	4.7
47	South Pass	L.Popo Agie R.	"	19mi. " "	13-30N-101W	9000	"	27.1	46.7	14.5	8.2	14.0	3.7
48	Wood River	Wood River	"	42mi.SW.Cody	28-46N-103W	8000	Shoshone	7.7	17.2	1.5	2.0	5.0	0.5
49	Sheridan Cr.R.S.#2	Sheridan Cr.	"	16mi.NW.Dubois	3-42N-109W	7500	Washakie	2.0	--	0.0	0.8	--	0.0
50	Brooks Lake #3	Wind River	"	Brooks Lake	23-44N-110W	9200	"	51.2	57.6	39.6	20.0	19.6	12.0
51	St.Lawrence R.S.	St.Lawrence Cr.	"	27mi.NW.Lander	26-1N-4W	9000	Shos.I.R.	18.6	30.2	6.9	5.6	9.7	1.6
52	Mosquito Park R.S.	Trout Creek	"	18mi. " "	23-2S-3W	9500	" " "	19.2	--	19.2	5.4	--	5.4
53	DuNoir	Wind River	"	9mi.NW.Dubois	27-42N-108W	8750	Washakie	15.3	23.5	7.1	4.5	6.8	2.2
54	T-Cross Ranch	Horse Creek	"	12mi.N.Dubois	1-43N-107W	8000	"	2.5	5.0	0.0	0.7	1.4	0.0
					Average for Drainage			19.9	30.4	10.6	6.7	9.6	3.0
	TONGUE RIVER												
14	Dome Lake	Goose Cr.	Wyo.	Dome Lake	11-53N-87W	8800	Bighorn	25.7	39.8	10.7	9.7	12.6	2.8
17	Big Goose Cr.R.S.	E.Goose Cr.	"	20mi.SW.Sheridan	4-53N-86W	7700	"	7.5	21.0	6.7	2.6	7.3	1.8
					Average for Drainage			16.6	30.4	8.7	6.2	10.0	2.3
	POWDER RIVER												
30	Red Fork	Middle Fork	Wyo.	23mi.W.Kaycee	18-43N-85W	7500	OffForest	11.8	22.5	2.6	3.6	6.9	0.7
31	Sour Dough	Sour Dough Cr.	"	10mi.W.Klondike	17-49N-84W	8500	Bighorn	16.8	29.9	6.0	4.4	10.2	1.0
					Average for Drainage			14.3	26.2	4.3	4.0	8.6	0.8

*On adjacent drainage
@Average for period of record
E Estimated.

MISSOURI AND ARKANSAS RIVER WATERSHEDS
Summary of Federal and State Cooperative Snow Surveys
Issued May 10, 1942, at Fort Collins, Colorado

No.	Main Drainage and Snow Course	Local Drainage	Location			Elev.	National Forest	May 1 Snow Cover Measurements					
			State	Locality	Description			Av. Snow Depth			Av. Water Content		
								Av.@	1941	1942	Av.@	1941	1942
								In.	In.	In.	In.	In.	In.
	NORTH PLATTE RIVER												
1	Cameron Pass	Michigan Cr.	Colo.	Cameron Pass	2-6N-76W	10300	Roosevelt	64.5	63.2	66.1	24.6	22.3	22.0
7	Park View	Illinois Cr.	"	7mi.SE.Rand	24-5N-78W	9200	Routt	21.4	27.7	32.2	8.3	13.5	9.8
8	Columbine Lodge	Grizzly Cr.	"	Rbt. Ears Pass	21-5N-82W	9300	"	45.3	48.1	49.5	19.5	18.0	18.1
51	Big Creek Lake	Big Creek	"	5mi.SW.Pearl	9-11N-82W	9000	"	---	25.4	---	---	8.2	---
62	Willow Creek P.*	Illinois Cr.	"	Willow Cr.Pass	1-4N-78W	9500	Arapaho	38.3	41.6	42.0	15.1	16.9	14.5
7	Bottle Creek	Encmpmnt Cr.	Wyo.	7mi.SW.Encmpmnt	24-14N-85W	8200	MedicineBow	22.7	21.8	23.1	8.7	8.1	7.0
8	Webber Spring	" "	"	10mi.W. "	27-14N-85W	9000	" "	46.3	42.0	40.8	18.4	15.3	13.4
9	Old Battle	" "	"	12mi.W. "	29-14N-85W	9800	" "	80.0	83.1	82.5	32.8	29.7	31.5
37	North French Cr.	N.French Cr.	"	Cont/Saratoga	27-16N-80W	10200	" "	85.1	89.4	89.2	34.2	31.9	32.0
38	N.Barrett Cr.#2	Barrett Cr.	"	" "	30-16N-80W	9400	" "	57.8	67.3	52.0	22.1	24.6	17.3
39	Ryan Park #2	" "	"	" "	34-16N-81W	8400	" "	20.0	31.9	19.6	7.1	12.1	4.9
					Average for Drainage			48.1	51.6	49.7	19.1	19.2	17.0
	SWEETWATER RIVER												
29	Grannier Meadows	Rock Creek	Wyo.	20mi.SW.Lander	19-30N-100W	9000	Washakie	28.6	50.8	12.9	9.9	16.6	3.6
47	South Pass*	" "	"	19mi. " "	13-30N-101W	9000	"	27.1	46.7	14.5	8.2	14.0	3.7
					Average for Drainage			27.8	48.8	13.7	9.0	15.3	3.6
	LARAMIE RIVER												
3	Brooklyn Lake	Nash Fork	Wyo.	7mi.NW.Centennial	11-16N-79W	10200	MedicineBow	54.3	60.2	57.9	22.1	21.8	17.7
11	Fox Park	Fox Creek	"	Fox Park	21-13N-78W	9200	" "	20.2	28.6	28.6	7.7	10.2	7.5
34	Pole Mountain#2*	Soldier Cr.	"	10mi.SE.Laramie	35-15N-72W	8700	" "	5.8	8.6	21.0	1.5	2.6	4.4
35	Libby Lodge #2	Libby Creek	"	3mi.NW.Cntennial	29-16N-78W	8700	" "	9.2	17.2	13.7	2.9	4.9	3.7
36	Hairpin Turn#2	Nash Fork	"	5mi.NW. "	24-16N-79W	9500	" "	29.2	31.3	31.4	9.7	10.0	7.1
4	W.Port-G-P.Tunnel	Laramie R.	Colo.	4mi.N.Chambers L.	7-8N-75W	8600	Roosevelt	---	10.2	---	---	3.0	---
50	Deadman Hill*	Deadman Cr.	"	10mi.W.R.Feather	26-10N-75W	10200	"	---	46.2	---	---	14.2	---
71	Deadman Hill#2*	Deadman Cr.	"	8mi.SW." "	6-9N-74W	10200	"	---	39.4	---	---	11.6	---
88	Roach	LaGarde Cr.	"	8mi.NW.Glendevey	5-10N-77W	9800	"	---	60.0	---	---	21.1	---
					Average for Drainage			23.7	29.2	30.5	8.8	9.9	8.1

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								Av. Snow Depth			Av. Water Content		
			State	Locality	Description			Av.@	1941	1942	Av.@	1941	1942
								In.	In.	In.	In.	In.	In.
	SOUTH PLATTE RIVER												
14	Hoosier Pass	S.Platte R.	Colo.	Hoosier Pass	13-8S-78W	11400	Pike	32.0	39.8	43.4	10.3	12.3	13.5
15	Fairplay	" " "	"	Fairplay	33-9S-77W	10000	"	T	0.0	T	T	0.0	T
83	Jefferson Cr.#2	Jefferson Cr.	"	5mi.NW.Jefferson	14-7S-76W	10100	"	10.4	26.2	21.4	2.7	7.0	5.9
					Average for Drainage			14.1	22.0	21.6	4.3	6.4	6.5
	CROW CREEK												
34	Pole Mountain #2	Crow Creek	Wyo.	10mi.SE.Laramie	35-15N-72W	8700	MedicineBow	5.8	8.6	21.0	1.5	2.6	4.4
	POUDRE RIVER												
1	Cameron Pass	Joe Wright Cr.	Colo.	Cameron Pass	2-6N-76W	10300	Roosevelt	64.5	63.2	66.1	24.6	22.3	22.0
2	Chambers Lake	Poudre River	"	Chambers Lake	6-7N-75W	9000	"	9.6	8.5	16.7	3.6	3.4	4.7
3	Big South	" "	"	2mi.E.Chambers L.	33-8N-75W	8600	"	1.1	1.3	6.1	0.3	0.3	1.7
50	Deadman Hill	No.Poudre R.	"	10mi.W.R.Feather	26-10N-75W	10200	"	---	46.2	---	---	14.2	---
65	Lake Irene*	Big S.Poudre	"	1mi.SW.Milner P.	8-5N-75W	10600	Ry.Mtn.N.P.	67.9	67.4	74.8	24.3	23.5	22.6
68	Hour Glass Lake	L.S.Poudre	"	2mi.NW.Pingree P.	18-7N-73W	9500	Roosevelt	21.3	19.1	35.3	6.9	6.7	10.2
71	Deadman Hill#2	N.Poudre R.	"	8mi.SW.R.Feather	6-9N-74W	10200	"	---	39.4	---	---	11.6	---
					Average for Drainage			32.9	31.9	39.8	11.9	11.2	12.2
	BIG THOMPSON												
65	Lake Irene*	BigThompson R.	Colo.	1mi.SW.Milner P.	8-5N-76W	10600	Ry.Mtn.N.P.	67.9	67.4	74.8	24.3	23.5	22.6
95	Hidden Valley #2	Hidden ValleyCr.	"	9mi.W.Estes P.	23-5N-74W	10200	" " " "	49.2	41.7	56.6	13.1	12.8	13.4
					Average for Drainage			58.6	54.6	65.7	18.7	18.2	18.0
	ST. VRAIN RIVER												
41	Wild Basin	N.St.Vrain R.	Colo.	5mi.W.Allens P.	24-3N-74W	10000	Ry.Mtn.N.P.	36.3	37.2	53.0	12.6	12.4	14.5
	BOULDER CREEK												
5	E.Port.Moffat T.	S.Boulder Cr.	Colo.	East Portal	2-2S-74W	9400	Roosevelt	5.3	5.6	22.0	1.5	2.6	6.6
60	University Camp#2	N.Boulder Cr.	"	5mi.SW.Ward	28-1N-73W	10300	"	55.6	51.9	72.0	19.8	16.6	23.2
					Average for Drainage			30.4	28.8	47.0	10.6	9.6	14.9

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			State	Locality	Description			Av. Snow Depth			Av. Water Content		
								Av.@	1941	1942	Av.@	1941	1942
								In.	In.	In.	In.	In.	In.
	CLEAR CREEK												
61	Loveland Pass #2	Clear Creek	Colo.	10mi.W.Georgetown	27-4S-76W	10100	Arapaho	39.6	42.5	50.0	13.4	12.7	16.1
	ARKANSAS RIVER												
19	Tennessee Pass	Tennessee Cr.	Colo.	Tennessee Pass	21-8S-80W	10200	Cochetopa	16.4	27.4	22.2	5.3	9.7	5.9
21	Twin Lakes Tun.	Lake Creek	"	9mi.W.Twin Lakes	22-11S-82W	10500	"	25.4	28.8	38.8	8.1	9.3	11.1
42	Marshall Creek*	Poncha Cr.	"	Marshall Pass	24-48N-6E	10800	"	30.3	54.4	45.4	10.6	17.8	13.5
43	Poncha Creek	" "	"	" "	19-48N-7E	10500	"	23.8	52.8	40.5	8.4	18.6	12.9
72	Whiskey Creek #2	Whiskey Cr.	"	Whiskey Cr.Pass	37.2N105.2W	10300	MaxwellGr.	18.1	44.9	29.7	6.7	16.8	10.6
74	LaVeta Pass#2*	Cuchara Cr.	"	LaVeta Pass	22-28S-70W	9300	SanCristoGr	9.9	36.3	29.0	3.8	13.8	11.3
78	Four Mile Park #2	Lake Creek	"	3mi.SW Twin L.	23-11S-81W	9700	Cochetopa	1.0	7.1	E0.0	0.3	2.4	E0.0
79	Fremont Pass #2	E.Fork Ark.R.	"	Fremont Pass	2-8S-79W	11400	Arapaho	49.9	52.8	63.4	17.0	17.7	19.2
81	Blue Lakes #2	Cuchara Cr.	"	15mi.SW.LaVeta	30-31S-69W	10000	San Isabel	21.6	48.9	37.2	7.9	16.6	13.5
92	Monarch Pass	S.Fork Ark.R.	"	Monarch Pass	16-49N-6E	10500	Cochetopa	69.6	63.3	75.8	24.1	24.5	23.7
					Average for Drainage			26.6	41.7	38.2	9.2	14.7	12.2

*On adjacent drainage
@ - Average for period of record
E - Estimated

RESERVOIR STORAGE

Reservoir Storage in Thousands of Acre-feet, Colorado and Wyoming, as of May 1, for the years 1933 and 1942, inclusive. (Based on data gathered by State Engineer of Colorado, U. S. Bureau of Reclamation and other agencies)
A = Percentage of capacity. B = Percentage of 10-year average. C = Percentage of filling forecast for 1942.

Reservoir	Capacity	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	10 yr.Avg.ϕ	A	B	C
COLORADO	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	%	%	%
Eleven Mile	81.9	--	--	--	4.8	16.4	27.4	66.8	70.5	81.9	81.9	50.0	100	164	100
Cheeseman	79.0	8.4	43.4	18.7	32.0	48.7	34.4	79.1	59.8	49.7	79.1	45.3	100	175	100
Marston	18.9	14.6	17.1	13.8	14.2	16.7	16.7	15.4	16.6	16.6	15.4	15.7	78	98	100
Barr	32.2	12.0	17.8	7.4	11.4	20.0	13.3	25.6	11.0	10.5	28.6	15.8	89	181	100
Milton	24.4	4.9	10.5	1.8	3.5	11.0	4.0	15.9	3.9	4.4	19.6	8.0	80	245	100
Standley	18.5	1.4	0.0	2.8	13.4	15.8	12.2	15.7	8.1	11.3	17.9	9.9	97	181	100
Marshall	10.3	1.8	3.1	0.1	4.1	6.0	6.9	6.2	1.6	5.4	8.7	4.4	84	198	100

ϕ Some averages for shorter periods.

RESERVOIR STORAGE

Reservoir Storage in Thousands of Acre-Feet, Colorado and Wyoming, as of May 1, for the years 1933 to 1942, inclusive. (Based on data from the State Engineer of Colorado, U. S. Bureau of Reclamation and other agencies.)
A = Percentage of capacity. B = Percentage of 10-year average. C = Percentage of filling forecast for 1942.

Reservoir	Capacity	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	10-yr. Avg. ϕ	A	B	C
COLORADO, Cont.	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	Ac-ft	%	%	%
Riverside	57.5	12.8	46.7	12.7	44.1	47.0	30.7	54.6	21.0	30.5	55.7	35.6	97	156	100
Empire	37.7	22.2	24.7	0.0	18.6	24.7	23.0	34.4	23.9	20.3	35.5	22.7	94	156	100
Jackson Lake	35.4	33.2	33.4	31.7	31.2	33.4	33.2	34.1	33.4	33.7	35.4	33.3	100	106	100
Prewitt	32.8	9.8	23.2	4.2	12.0	19.2	9.7	28.6	7.3	6.8	28.4	14.9	87	191	100
Point of Rocks	65.0	29.4	60.0	30.1	56.8	64.3	38.0	66.4	35.1	44.2	67.5	49.2	104	137	100
Julesburg	28.2	20.3	21.9	22.8	22.0	20.9	22.9	21.5	22.4	23.1	23.0	22.1	82	104	100
Loveland	14.3	0.0	2.1	0.7	3.0	1.0	1.0	12.3	0.2	1.2	7.0	2.8	49	250	100
Mariano	5.4	3.1	3.3	0.4	3.0	3.0	3.9	4.8	1.2	2.7	4.6	3.0	85	153	100
Union	12.7	0.6	4.1	0.0	2.9	7.5	3.1	12.6	2.6	0.8	6.7	4.1	53	163	100
Windsor Res.	18.6	4.2	11.8	2.8	11.2	10.5	11.8	17.7	5.0	11.8	14.8	10.2	80	145	100
Cache la Poudre	9.5	5.0	9.1	2.8	5.7	7.3	7.5	9.2	4.7	7.2	9.3	6.8	98	137	100
Fossil Creek	11.6	6.1	11.2	2.9	8.1	7.1	5.5	11.7	3.7	5.6	10.3	7.2	89	143	100
Terry	8.2	4.1	4.4	4.1	4.2	4.1	4.1	5.9	4.1	4.0	6.4	4.5	78	142	100
Halligan	6.4	1.6	2.0	3.0	2.9	4.1	4.9	4.3	1.7	0.0	2.8	2.7	44	104	75
Chambers Lake	8.8	2.3	4.0	0.7	2.8	2.4	3.1	7.3	2.2	3.3	3.1	3.1	35	100	100
Twin Lakes	57.9	5.9	6.6	13.8	14.5	14.4	7.2	28.4	15.3	11.5	37.5	15.5	65	242	100
Meredith	41.9	0.0	0.0	0.0	0.0	3.0*	0.0	24.3	0.0	0.0	33.3	6.1	80	546	100
Horse Creek	26.9	4.3	0.0	0.0	0.0	7.9	0.0	8.3	0.0	0.0	11.6	3.2	43	362	100
Adobe Creek	61.6	0.0	0.0	0.0	0.0	1.7	0.0	8.2	0.0	0.0	58.2	6.8	94	856	100
Model	--	0.0	2.7	0.0	2.6	1.8	3.0	8.5	1.3	5.3	9.1	3.4	--	268	100
Plains	--	0.0*	0.0	0.0	0.0	0.0	0.0	33.4	0.0	0.0	63.6	9.7	--	656	--
WYOMING															
Pathfinder	1070.0	404.7	331.8	133.2	263.5	343.8	352.8	430.3	77.7	92.0	261.9	269.2	24	97	--
Guernsey	54.6	63.8	37.6	24.8	44.7	37.5	52.5	42.0	47.1	50.3	49.5	45.0	91	110	100
Seminoe	1000.0						0.0	85.5	66.6	98.8	160.8	102.9	16	156	85
Alcova	185.0					0.0	99.4	123.5	92.8	74.3	133.4	104.7	72	128	100
Wheatland	90.0			13.0*	35.0*	20.9	26.1	51.0	9.0	17.7	30.0	25.3	33	119	60
Shoshone	456.6			354.8	387.7	342.1	317.1	394.3	106.9	36.9	357.0	287.1	78	124	100
Jackson Lake	847.0	535.9	348.6	206.0	331.5	504.2	430.6	620.8	492.7	332.1	462.8	426.5	55	109	75
Bull Lake	152.0						0.0	42.8	38.8	15.7	67.7	41.2	45	164	75
Pilot Butte	30.0						21.5	19.8	24.7	21.7	20.4	21.6	68	94	75

ϕSome averages for shorter periods   *Estimated